found in books of reference. Some of the words proposed by the author are not accepted by good authorities, as for example, 'chemic' for chemical, 'physiologic' for physiological, and in this respect the work is sometimes misleading. In the attempt to give a complete list of the bacteria many names are given which would not be accepted by a bacteriologist, the list evidently having been prepared by some one not familiar with the subject. These, however, are minor details; the main fact about the work is that it is the most complete and practically useful single volume dictionary of medical terms in the English language, and as such it is commended to the readers of SCIENCE.

NOTES.

THE INTERNATIONAL ZOÖLOGICAL CONGRESS.

THE following invitation has just been issued to the Third International Zoölogical Congress to be held in Leyden next September: "The first International Zoölogical Congress took place in Paris at the time of the International Exhibition of 1889. The second meeting was held in Moscow in 1892. There the resolution was passed that in September, 1895, this Congress would again meet in Leyden, the oldest University of the Netherlands. The Netherlands' Zoölogical Society has taken upon itself to make all the necessary arrangements for the reception and accommodation of the Congress. At the invitation of that Society, the undersigned request you to become a member of the International Congress and to attend the Leyden meeting. It appears probable that different questions, in which the interest of zoölogists in general, as well as those of specialists are involved, can be brought to a solution by mutual exchange of opinions on the occasion of such an international meeting. At any rate the way that will lead to such a solution may there be prepared. Moreover it is undoubtedly a distinct advantage to become personally acquainted with representatives of Zoölogical Science from different parts of the world. As soon as you shall have expressed your sympathy with the above stated aims of the International Zoölogical Congress we shall be glad to be allowed to append your name to a more general invitation directed to all zoölogists and morphologists, which will be brought before our fellow-workers by the aid of different periodicals. We venture to add that even in case of your not being able to attend the proposed Congress you will favor us with the expression of your sympathy with the movement. Pray to be so kind to send your answer to Dr. P. P. C. Hoek, Secretary of the Netherlands Zoölogical Society at Helder, Holland."

The invitation is signed by about one hundred naturalists in different parts of the world, including the following from this country: A. Agassiz, E. D. Cope, E. L. Mark, O. C. Marsh, H. F. Osborn, W. B. Scott and C. O. Whitman.

THE TESTING OF ELECTRICAL STREET RAILWAYS.

THE expenditure and distribution of power on electrical street railways has formed a subject of investigation on a somewhat extensive scale, and for a number of years past, by the departments of Sibley College, Cornell University. In the issue of the *Sibley College Journal* for January, Mr. James Lyman, formerly of Yale University, now engaged in special work of this character in the graduate department of the College, summarizes some of the most important results thus collated. In the performance of the work of investigation, parties are sent out, sometimes to the number of ten or a dozen, including the experts in charge and their student-assistants, divided into squads, assigned each to its special part of the work, the electricians to the measurement of current, the electrical en-

gineers to the handling of the dynamos and electric 'plant,' the mechanical engineers to the testing of engines and boilers, and each individual to that work which he can best direct or with regard to which the experience will prove most fruitful.*

The records of the Sibley College laboratories are thus peculiarly rich in data of this kind. The first case quoted is that of the trial of the Rochester, N. Y., street railway plant by Dr. Bedell, in 1891. The road has about twenty miles of track, and very easy gradients. The traction demanded 1.4 *E. H. P.* per ton, at 6.5 miles average speed, efficiency of line was 90 per cent., that of the station 64.8 per cent., and there were needed, at the engines, 2.4 *I. H. P.* per ton, 20 *I. H. P.* per car. The Buffalo plant was tested in 1892, under the responsible direction of Messrs. Wood and Palmer. The average power demanded was 1.76 *I. H. P.* per ton. The Ithaca street railway was tested in 1894, and is important as illustrating work on heavy gradients, averaging about nine per cent., a maximum occurring at twelve or thirteen. The traction coefficient was found to be 40 pounds, per one per cent. of gradient and per ton. In a level country, the estimate for power to be provided at the station is put at 2.5 I. H. P. per ton of car and load, the number of cars on the line averaging about ten. If averaging twenty, the figure becomes 2.2.

* As many as a dozen indicators and numerous volt and ammeters, dynamometers, special condensing apparatus, scales for weighing coal and water, and similar test apparatus are often supplied by the College, the resources of which are gauged, in a way, by the fact that it furnishes a large part of its graduating classes of late years, numbering about a hundred, with all the instruments needed in work of investigation in their graduating theses; which theses are usually accounts of such work. Its working 'plant' includes fifteen steam engines, seven gas engines, some fifty gauges and a still larger number of steam engine indicators.

THE MINNESOTA ACADEMY.

The Minnesota Academy of Natural Sciences has, in addition to its 'Bulletin,' instituted a new series of publications termed 'Occasional Papers.' It is intended that in this series shall be published researches of considerable importance. Vol. I., No. 1, which has recently appeared, contains 'Preliminary Notes on the Birds and Mammals collected by the Menage Scientific Expedition to the Philippine Islands,' by Frank S. Bourns and Dean C. Worcester.

ANTHROPOLOGY.

Under the title of 'Notes on Primitive Man in Ontario,' by David Boyle, there has been printed in Toronto, by order of the Legislative Assembly, as an appendix to the report of the Minister of Education, Dr. G. W. Ross, a pamphlet of about 100 pages, containing much instruction concerning the aboriginal tribes of that province. Mr. Boyle has been for many years the efficient curator of the valuable Ethnological Museum of the Canadian Institute. This monograph comprises many pictures of the native implements of stone, clay, bone, horn, shell and copper in that museum, and will be useful to ethnologists for purposes of comparison.

Tsetsaút is the Tsimsián name of a small tribe recently discovered on Portland Inlet, British Columbia, 54° 50′ Lat., which consists at present of twelve Indians only. They live on the proceeds of hunting and fishing and originally spoke a Tinné or Athapaskan dialect, which is evidenced by the fact that two of their number still remember words of it, though the rest speak the Nass dialect of the Tsimsián Indians surrounding them. Even the original Tinné name of the tribe is no longer remembered. Dr. Franz Boas studied the tribe during the later months of 1894, and also discovered another remnant of the same linguistic family, the Tinné, which lives in the vicinity. He favors, somewhat,

the theory that Haida, Tlinkit and Tinné are related to each other, and that after a more thorough study the three will be found to form one and the same linguistic family. Dr. Boas' discovery is remarkable for this reason, that the great Tinné family is almost exclusively an inland nation, and has pushed its branches to the ocean only at two places, viz., in Southern Texas (Lipans) and in Southwestern Oregon (Rogue Rivers), contiguous to the northwest coast of California, where little Tinné tribes have settled also.

Alaska. This name was originally applied only to the narrow peninsula situated at the southwest extremity of the Alaska Territory. It is a corruption of alákshak, *mainland, continent*, a term of the Eastern dialects of the Ale-ūt language. The name of *Unalashka Island* contains the same word, for it is contracted from ángun alákshak, 'to the west of the mainland.' Ángun, *west*, also enters into the composition of Unángun, a division of the Ale-ūt people, which is reducible to un, *people*, and ángun, *west*. (From notes by Ivan Petróff.)

THE Department of Anthropology, University of Chicago, has just published Bulletin 1—*Notes on Mexican Archæology*, by Frederick Starr. A full description is given of the ruins of an interesting 'painted house' at San Juan de Teotihuacan. The walls were decorated with pictures, in a variety of colors, representing warriors and religious personages. The designs are reproduced in a series of a dozen cuts. Some notes are also given regarding Mitla and Monte Alban. Paintings from a wall at Mitla are reproduced in full size.

It is the intention of the University to publish Bulletins in this Department from time to time as fresh material is secured.

ZOÖLOGY.—THE MAMMALS OF FLORIDA.

MR. FRANK M. CHAPMAN has recently published a list of the Mammals known to inhabit the State of Florida (Bull. Amer. Mus. Nat. Hist. vi. pp. 333-346). He gives in all, the names of 53 species and sub-species. Aquatic species are excluded. The largest forms are the Virginia deer, the black bear, the puma and the wolf. The last-named is approaching extinction. The beaver is believed to occur in the Chipola River.

The sole West Indian form is a leaf-nosed bat (*Artibeus carpolegus*), and this is believed to be only an accidental visitant. The house-rat of Florida is the white-bellied roof rat (*Mus alexandrius*) rather than the Norway rat. F. W. T.

GEOLOGY.

AT a meeting of the Council of the Michigan Academy of Sciences, Messrs. A. C. Lane and I. C. Russell were appointed a committee to present to the Legislature a plan for a topographical survey of Michigan. The plan to be proposed will be in coöperation with the U. S. Geological Survey and the preparation of a map similar to the maps of Massachusetts, Rhode Island and Connecticut, recently compiled at the joint expense of the States named and the U. S. Geological Survey.

PROFESSOR J. E. TODD, State Geologist of South Dakota, has just issued his first report. It is entitled 'South Dakota Geological Survey, Bulletin No. 1: A Preliminary Report on the Geology of South Dakota.' In this volume the present state of knowledge concerning the geology of the State is presented briefly and in a form that is acceptable to the intelligent citizen as well as to the specialist. The report is an octavo of 172 pages, and it is accompanied by several plates and a geological map of the State.

THE committee appointed by the members of the Johns Hopkins University to mature a plan for securing a permanent memorial of the late Professor George Huntington Williams are able to announce

that subscriptions have been received of a sufficient amount to procure a portrait in oil, which will soon be completed and presented to the University. The artist selected is Mr. Robert G. Hardie, of New York.

ENTOMOLOGY.

In a paper read to the K. Böhm. Gesellschaft der Wissenschaften on November 23d last, Dr. Anton Fritsch, of Prag, announced the discovery in the Permian beds of Bohemia of the larval cases of a caddis-fly. This is the first indication of the existence of insects with a complete metamorphosis in paleozoic times, unless the doubtful fragments found by Dathe in Silesian culm are to be regarded as shards of beetles, or the passages found in certain carboniferous woods are to be credited to coleopterous larvæ. It is to be hoped that Dr. Fritsch will amply illustrate these remains in his great work now in progress on the Fauna der Gaskohle Böhmens.

GENERAL.

Professor Warburg, of Freiberg, has been called to Berlin as the successor of Kundt.

Professor Kulz, of Marburg, known for his researches in physiological chemistry, died on January 16.

Macmillan & Co. announce a translation by Dr. A. C. Porter, of the University of Pennsylvania, of the *Lehrbuch der Botanik*, by Strasburger, Noll, Schenck and Schimper.

The St. Petersburg Academy of Sciences has recently made some changes in the system of publishing papers communicated to it. In September, 1894, it commenced the publication of a monthly number, under the title *Bulletin de l' Académie Impériale des Sciences*, which serves as the organ of the three classes of the Academy. This *Bulletin* is intended to include the *procès-verbaux* of the meetings, annual reports of scientific researches, reports on prizes conferred by the Academy, notes on the work of the museums, &c. In addition to notices of this kind, the *Bulletin* will contain short scientific papers. The *Mémoires de l'Académie Impériale des Sciences* will form in future the second means of publication. It will be divided into two independent series, dealing respectively with the physico-mathematical section of the Academy's papers, and the historical and philological section. The publication of the *Mélanges, tirés du Bulletin*, has been discontinued.—*Nature.*

An International Congress on Childhood will be held in Florence in the spring of 1895. Among the questions to be discussed are the physical, moral and mental elevation of children, children's hospitals, the care of deaf-mute and blind children up to the time of their admission into an educational institution, care of poor and abandoned children, reformatories, and vagabondage in its relation to childhood.—*N. Y. Medical Record.*

SOCIETIES AND ACADEMIES.

A. A. A. S. MEETING, 1895.

At a special meeting of the Council, held on January 26th, it was decided to postpone the proposed meeting in San Francisco. An invitation from Springfield, Mass., to hold the meeting of 1895 in that city, was accepted. The date of the meeting was fixed as follows: Council meeting, Wednesday, August 28th, at noon; General Sessions, Thursday, August 29th, at 10 A. M.

Special efforts will be made by the officers of the sections to prepare programmes for the sections in advance of the meeting and for this purpose members are requested to send abstracts of their papers, as early as possible, to the Permanent Secretary, or to the Secretaries of the Sections.

F. W Putnam, *Permanent Secretary.*

Salem, Mass., Jan. 30, 1895.

NEW YORK ACADEMY OF SCIENCES; SECTION OF ASTRONOMY AND PHYSICS, FEB. 4.

Professor W. Hallock showed *a new*